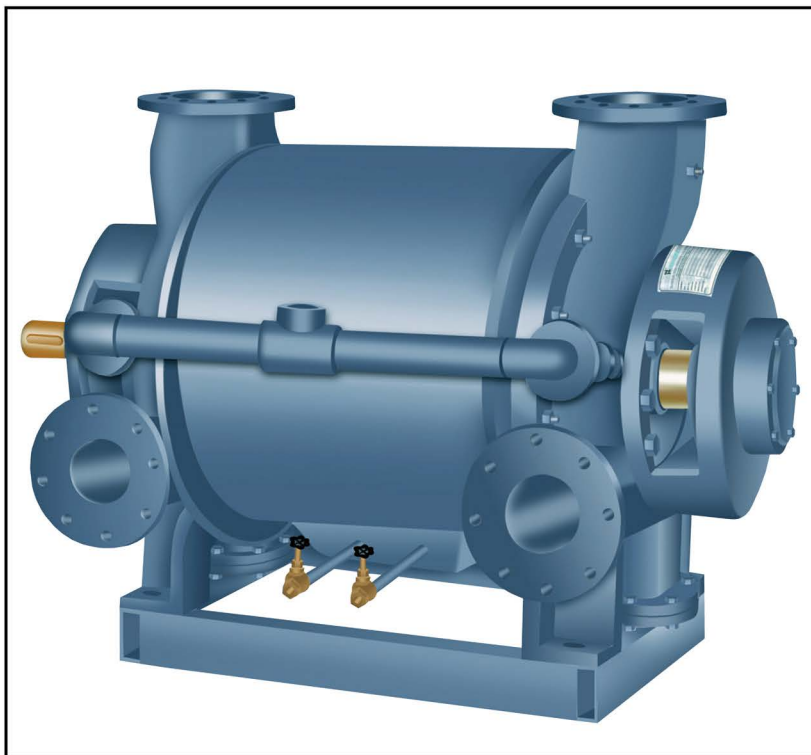


# LIQUID RING VACUUM PUMPS/ COMPRESSORS



SAVE ENERGY  
SAVE MONEY

 **aeromatic®**

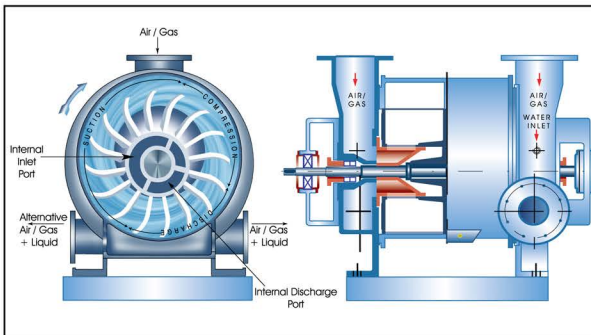
# LIQUID RING VACUUM PUMPS / COMPRESSORS

## SPECIAL FEATURES :

- There is only one rotating part - a balanced rotor running with close clearances without any metallic contact with other parts.
- No lubrication is required and air or gas handled is oil free.
- The Pump can handle hot and saturated vapours. Vapours are condensed by cool seal water.
- Air is compressed by rotating water ring radially and outlet parts are also radial. The pump can comfortably handle dust, fibers and foreign matter with seal water.
- The pump can handle more seal water and hence for many of the applications water receiver is not required.
- The pump has cylindrical control plates having ample area for inlet/outlet port fitted with close clearances to the rotor. Axial clearances are not to be maintained and so it is very easy for maintenance. The pump maintenance is even less than an electric motor.
- Pressurized gland system ensures leakages of atmospheric air into the pump.
- Unloader valves are provided to remove any foreign solid particles like any process fibres/pulp, sand, silt, ash which will increase life of the pump and decrease over all maintenance.
- Low power and water consumption.
- Control cone clearance are not effected by small variation in axial length / axial position of the rotor.
- Ball / roller bearings on both sides are floating and have small axial movement as in a electric motor.
- Control cone port angle selected on basis of specific operating condition which reduce over compression and power.
- The pump gives non-pulsating vacuum because the air is pre-compressed before it leaves the pump.

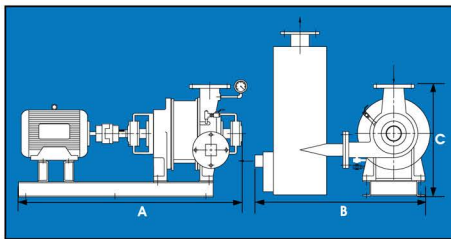
## MATERIAL OF CONSTRUCTION :

- Graded Cast Iron
- Phosphorous bronze
- Aluminum bronze
- SS 316
- SS 304
- SS 410
- Cast alloys
- Cast Steel

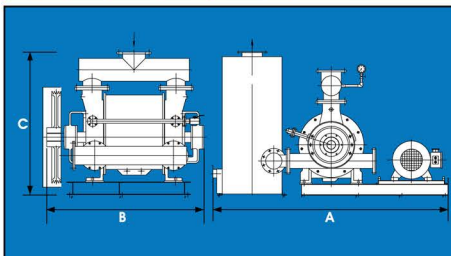


## WORKING PRINCIPLE :

A balanced cylindrical rotor with hollow hub and a series of curved blades run freely in eccentric casing. The sufficient sealing liquid, usually water forms a solid ring on periphery of casing due to the centrifugal force. Since rotor is rotated in eccentric casing, the blade creates working spaces whose volume increases as rotor rotates from lower to upper vertex and decreases as the rotor rotates from upper to lower vertex. The uniform distribution of working spaces on rotor periphery results in continuous suction and exhaust of gases.



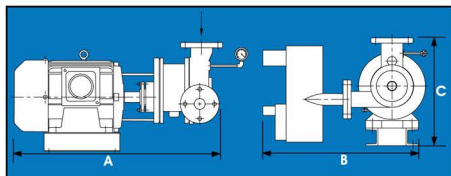
MODEL	A	B	C	INLET SIZE (N.B.)	SEAL WATER CONNECTION (B.S.P.)
41	1100	860	550	Ø50	1/2"
42	1100	860	550	Ø50	1/2"
51	1525	1000	400	Ø100	3/4"
52	1655	1000	400	Ø100	3/4"



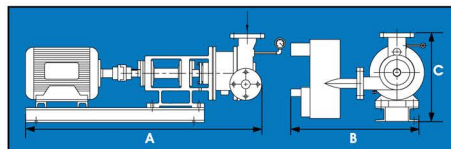
MODEL	A	B	C	INLET SIZE (N.B.)	SEAL WATER CONNECTION (B.S.P.)
43	1325	860	880	Ø100	1/2"
44	1325	860	880	Ø100	1/2"
61	1810	1030	1080	Ø150	3/4"
62	1810	1100	1080	Ø150	3/4"
70	2185	1230	1265	Ø150	1"
100	2300	1500	1380	Ø200	1-1/2"
120	2300	1610	1380	Ø200	1-1/2"
140	2875	1675	1610	Ø250	1-1/2"
170	2875	1790	1610	Ø250	1-1/2"

For higher capacity range - 4000 - 10,000 m<sup>3</sup>/hr, details available on request.

\* All dimensions are in mm.

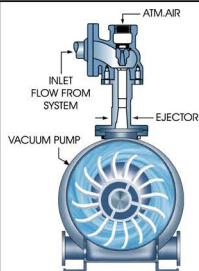
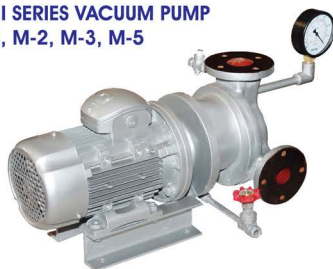


MODEL	A	B	C	INLET SIZE (N.B.)	SEAL WATER CONNECTION (B.S.P.)
M-1	400	645	345	Ø38	1/4"
M-2	440	645	350	Ø38	1/4"
M-3	540	645	255	Ø38	1/4"
M-5	550	645	365	Ø38	1/4"



MODEL	A	B	C	INLET SIZE (N.B.)	SEAL WATER CONNECTION (B.S.P.)
10	800	645	405	Ø38	1/4"
20	825	645	405	Ø38	1/4"
21	825	645	405	Ø38	1/4"
22	915	645	405	Ø38	1/4"
31	900	645	405	Ø38	1/4"
32	890	645	405	Ø38	1/4"

## MINI SERIES VACUUM PUMP M-1, M-2, M-3, M-5



## WATER RING VACUUM PUMP WITH AIR EJECTOR

### WORKING PRINCIPLE :

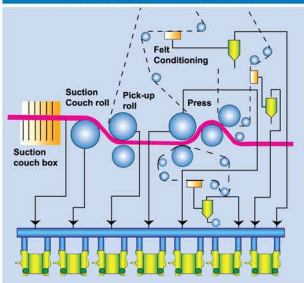
Pump suction draws atmospheric air through the ejector's super-sonic nozzle. Extremely high velocity at the ejector nozzle creates high vacuum at the ejector neck, connected to the system. The diffuser nozzle compresses both system gases and atmospheric air. The WATER RING VACUUM PUMP takes the suction and carries out the evacuation process.

### PERFORMANCE DATA

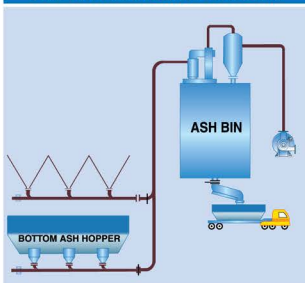
MODEL	HP	CAPACITY m <sup>3</sup> / hr. at 25 mm. Hg abs.
EJ 43	15	130
EJ 44	20	160
EJ 61	30	270
EJ 62	40	360
EJ 70	50	540
EJ 100	60	730
EJ 120	75	850

For higher capacity, details available on request.

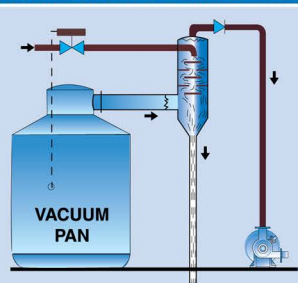
### DEWATERING IN PAPER MACHINE



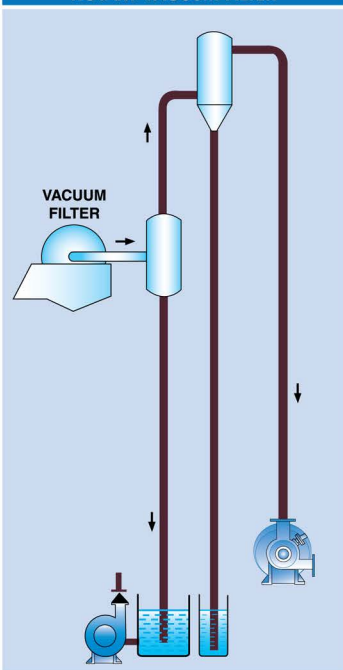
### DRY ASH HANDLING SYSTEMS



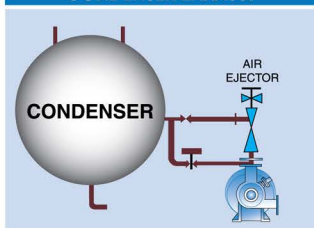
### VACUUM PAN FOR SUGAR INDUSTRIES



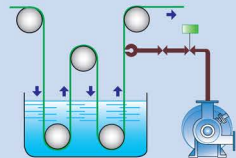
### ROTARY VACUUM FILTER



### CONDENSER EXHAUST



### MOISTURE EXTRACTION FROM FABRIC



### APPLICATIONS :

- Textile Industries
- Plastic
- Paper Mill
- Sugar Plant
- Fertilizers
- Petrochemicals
- Thermal & Hydro Power Plant
- Chemical Industries
- Pharmaceuticals
- Mines
- Coal Preparation Plant
- Refinery
- Beverages and Distilleries
- Railways
- Shipping
- Tyre Industries